

WHAT IS CLAIMED IS:

1. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:
 - 10 interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from data developed by said terminal apparatus said interface means further including a consumable key test means to qualify callers with respect to limited use;
 - 15 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller; and means connected to said interface means for processing said statistical data as to isolate a subset of said individual callers.
2. A statistical analysis system for use with a communication facility including terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

5 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

10 record means connected to said interface means for initiating a file and storing data relating to specific of said callers;

15 means coupled to said interface means and said record means for assigning individual designations to callers and storing said designations in said record means, said designations including representations indicative of the calling order sequence of said individual callers, and means connected to said record means for processing statistical data as to identify a subset of said individual callers.

3. A statistical analysis system for use with a communication facility including

15 terminal apparatus for individual callers, wherein said terminal apparatus may comprise a 60, rental telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

20 interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

5 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller; and manual terminal means for use by a person to communicate directly with at least one of said individual callers, said manual terminal means being coupled to said interface means and responsive to predetermined conditions to couple said manual terminal means to a caller terminal.

10 4. A system according to claim 3 further including means connected to said interface means for processing said statistical data as to isolate a subset of said individual callers and thereby actuate said manual terminal means.

15 5. A statistical analysis system for use with a communication facility including terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

20 interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus; voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical data for specific callers including data developed by said terminal apparatus;

means coupled to said interface means and said record means for assigning individual designations to callers and storing said designations in said record means; and means for recalling data stored in said record means in response to said individual designations.

6. A statistical analysis system for use with a communication facility including

terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical data for specific callers including data developed by said terminal apparatus;

means coupled to said interface means and said record means for assigning individual designations to callers and storing said designations in said record means, said designations including representations of the telephone number of the terminal apparatus used by a caller; and

5 means connected to said record means for processing statistical data as to identify a subset of said individual callers.

7. A statistical analysis system for use with a communication facility including terminal apparatus for individual callers, wherein said terminal apparatus may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

10 interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signals representative of identification and statistical data developed by said terminal apparatus;

15 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical data for specific callers including data developed by said terminal apparatus; and

20 means coupled to said interface means and said record means for assigning individual designations to callers and storing said designations in said record means, said

designations including an encrypted representation of said data developed by said terminal apparatus.

8. A statistical analysis system for use with a communication facility including
5 remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data and wherein said facility may provide calling terminal digital signals to a called station representative of a remote calling terminal, said control system comprising:
10 interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;
15 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;
analysis means connected for processing data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing; and call data analyzer structure for modifying said data from a plurality of callers under control of said terminal digital signals.

20 9. A control system according to claim 8 further including record means connected to said interface means for initiating a file and storing said terminal digital signals as identification at least in part for a caller.

10. A control system according to claim 8 further including switch means whereby passage of said data from a plurality of callers to said analysis means is controlled by said terminal digital signals.

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11. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data and wherein said facility may provide called terminal digital signals to a called station representative of the called station, said control system comprising:

10 interface means coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

15 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

analysis means connected to said record means for processing said statistical data from a plurality of callers in combination and in accordance with a plurality of distinct formats to isolate a select subset of said callers by interrelated processing; and

20 means for actuating one of said distinct formats in accordance with said called terminal digital signals.

12. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification

5 and statistical data, said control system comprising:

coupling structure including a plurality of interface units each capable of accommodating a plurality of communication paths coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

voice generator means in said interface means coupled for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical digital data for specific callers including data-developed by said terminal apparatus; and

analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing.

20 13. A system according to claim 12 further including means for queuing said remote stations to said coupling means whereas to sequence interface communications.

14. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and 5 statistical data, said control system comprising:

interface structure coupled to said communication facility to interface said

terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

10 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

analysis means connected for processing data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing; and qualification means for qualifying access from said remote terminal apparatus to 15 said analysis means.

15. A system according to claim 14 wherein said qualification means comprises means for limiting access from a remote terminal to said analysis means on the basis of accesses per interval of time.

20 16. A system according to claim 14 wherein said qualification means comprises means for limiting access from a remote terminal to said analysis means under control of said signals representative of data developed by said terminal apparatus.

17. A system according to claim 16 wherein said qualification means includes a look-up table.

5 18. A system according to claim 16 wherein said qualification means includes a use-rate calculator.

10 19. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:
15 interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus; voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller; and analysis means connected for processing data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing including a display structure for visually displaying data regarding said select subset.

20. 20. A system according to claim 19 further including a printer.

21. A statistical analysis system for use with a communication facility including
remote terminal apparatus for individual callers, wherein said remote terminal apparatus may
comprise a conventional telephone instrument including voice communication means and digital
5 input means in the form of an array of alphabetic numeric buttons for providing identification
and statistical data, said control system comprising:

interface structure coupled to said communication facility to interface said
terminal apparatus for voice and digital communication and including means to provide
signal values from signals representative of data developed by said terminal apparatus;

10 voice generator means coupled through said interface means for actuating said
terminal apparatus as to provide vocal operating instructions to an individual caller;

a sequencer for developing sequence data signals as identification data;

15 record means connected to said interface means for initiating a file and storing
identification data and statistical digital data for specific callers including data developed
by said terminal apparatus; and

analysis means connected to said record means for processing said statistical data
from a plurality of callers in combination to isolate a select subset of said callers by
interrelated processing.

20 22. A statistical analysis system for use with a communication facility including
remote terminal apparatus for individual callers, wherein said remote terminal apparatus may
comprise a conventional telephone instrument including voice communication means and digital

input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface structure coupled to said communication facility to interface said

terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

a qualification unit for developing qualification data signals as identification data;

record means connected to said interface means for initiating a file and storing identification data and statistical digital data for specific callers including data developed by said terminal apparatus and

analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing.

23. A statistical analysis system for use with a communication facility including

remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

5 voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

a designation unit for developing designation data signals as identification data consisting of at least two data elements;

10 record means connected to said interface means for initiating a file and storing identification data and statistical digital data for specific callers including data developed by said terminal apparatus; and

analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing.

15 24. A statistical analysis system for use with a communication facility including

remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

20 interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller; a sequencer for developing sequence data signals as identification data; a qualification unit for developing qualification data signals as identification data; a designation unit for developing designation data signals as identification data; 5 record means connected to said interface means for initiating a file and storing identification data and statistical digital data for specific callers including data developed by said terminal apparatus; and analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing.

25. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:
20 interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus; voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

record means connected to said interface means for initiating a file and storing identification data and statistical digital data for specific callers including data developed by said terminal apparatus;

5 analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing; and

a qualification unit for controlling access of callers to said analysis means in accordance with the content of said record means.

10 26. A statistical analysis system for use with a communication facility including remote terminal apparatus for individual callers, wherein said remote terminal apparatus may comprise a conventional telephone instrument including voice communication means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said control system comprising:

15 interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus;

voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller;

20 a designation unit for developing designation data signals as identification data and including an encryptor; and

analysis means connected to said record means for processing said statistical data from a plurality of callers in combination to isolate a select subset of said callers by interrelated processing.

5 27. A statistical analysis system for use with a communication facility including
remote terminal apparatus for individual callers, wherein said remote terminal apparatus may
comprise a conventional telephone instrument including voice communication means and digital
input means in the form of an array of alphabetic numeric buttons for providing identification
and statistical data, said control system comprising:

interface structure coupled to said communication facility to interface said terminal apparatus for voice and digital communication and including means to provide signal values from signals representative of data developed by said terminal apparatus; voice generator means coupled through said interface means for actuating said terminal apparatus as to provide vocal operating instructions to an individual caller; and analysis means, connected for processing data from a plurality of caller's in combination to isolate a select subset of said callers by interrelated processing including a random number generator for selecting said subset.

28. A process for statistical analysis of data for use with a communication facility
20 including remote terminal apparatus for individual callers, wherein said remote terminal
apparatus may comprise a conventional telephone instrument including voice communication

means and digital input means in the form of an array of alphabetic numeric buttons for providing identification and statistical data, said process including the steps of:

5 interfacing said communication facility to provide voice signals and receive digital identification and answer signals representative respectively of identification data and answer data developed by said terminal apparatus under control of said caller;

10 generating voice signals and supplying said voice signals to actuate said terminal apparatus, as to provide vocal operating instructions to a caller;

15 providing sequence signals representative of sequence data indicating the time sequence of a call with reference to the calls from other callers;

20 qualifying callers based on said digital identification signals;

25 designating callers based on said digital identification signals;

30 initiating files and storing data from qualified callers including, (1) answer data for specific callers as indicated by said answer signals, (2) sequence data as indicated by said sequence signals and (3) identification data as indicated by said identification signals;

35 providing external data signals representative of external data distinct from said answer data provided from said callers; and

40 comparing said answer data from said callers and analyzing said answer data with said external data in combination to isolate a select subset of said callers.

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